

## SEQUENCE LISTING

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&lt;110&gt; Qin, Ning

Codd, Ellen

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&lt;120&gt; cDNA encoding the Calcium Channel Alpha2Delta-4 Subunit

&lt;130&gt; calcium channel alpha2delta-4 subunit

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&lt;140&gt;

&lt;141&gt;

&lt;160&gt; 10

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&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 27

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence:

oligonucleotide

<400> 1

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27

5

<210> 2

<211> 27

<212> DNA

10 <213> Artificial Sequence

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<223> Description of Artificial Sequence:

oligonucleotide

15

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20 <210> 3

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<212> DNA

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oligonucleotide

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<210> 4

5 <211> 23

<212> DNA

<213> Artificial Sequence

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10 <223> Description of Artificial Sequence:

oligonucleotide

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23

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20 <213> Artificial Sequence

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<210> 6

<211> 26

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:

oligonucleotide

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<211> 17

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic

peptide

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5

10

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Cys

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<211> 18

<212> PRT

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<223> Description of Artificial Sequence: synthetic  
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<400> 8

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10

15

15 Leu Cys

<210> 9

20 <211> 3486

<212> DNA

<213> Homo sapiens

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&lt;210&gt; 10

&lt;211&gt; 1090

<212> PRT

<213> Homo sapiens

<400> 10

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1 5 10 15

Ala Asp Thr Phe Gly Gly Asp Leu Tyr Asn Thr Val Thr Lys Tyr Ser

20 25 30

10

Gly Ser Leu Leu Leu Gln Lys Lys Tyr Lys Asp Val Glu Ser Ser Leu

35 40 45

Lys Ile Glu Glu Val Asp Gly Leu Glu Leu Val Arg Lys Phe Ser Glu

15 50 55 60

Asp Met Glu Asn Met Leu Arg Arg Lys Val Glu Ala Val Gln Asn Leu

65 70 75 80

20 Val Glu Ala Ala Glu Glu Ala Asp Leu Asn His Glu Phe Asn Glu Ser

85 90 95

Leu Val Phe Asp Tyr Tyr Asn Ser Val Leu Ile Asn Glu Arg Asp Glu

100 105 110

25

Lys Gly Asn Phe Val Glu Leu Gly Ala Glu Phe Leu Leu Glu Ser Asn

115 120 125

Ala His Phe Ser Asn Leu Pro Val Asn Thr Ser Ile Ser Ser Val Gln



130 135 140

Leu Pro Thr Asn Val Tyr Asn Lys Asp Pro Asp Ile Leu Asn Gly Val

145 150 155 160

5

Tyr Met Ser Glu Ala Leu Asn Ala Val Phe Val Glu Asn Phe Gln Arg

165 170 175

Asp Pro Thr Leu Thr Trp Gln Tyr Phe Gly Ser Ala Thr Gly Phe Phe

10 180 185 190

Arg Ile Tyr Pro Gly Ile Lys Trp Thr Pro Asp Glu Asn Gly Val Ile

195 200 205

15 Thr Phe Asp Cys Arg Asn Arg Gly Trp Tyr Ile Gln Ala Ala Thr Ser

210 215 220

Pro Lys Asp Ile Val Ile Leu Val Asp Val Ser Gly Ser Met Lys Gly

225 230 235 240

20

Leu Arg Met Thr Ile Ala Lys His Thr Ile Thr Thr Ile Leu Asp Thr

245 250 255

Leu Gly Glu Asn Asp Phe Val Asn Ile Ile Ala Tyr Asn Asp Tyr Val

25 260 265 270

His Tyr Ile Glu Pro Cys Phe Lys Gly Ile Leu Val Gln Ala Asp Arg

275 280 285

Asp Asn Arg Glu His Phe Lys Leu Leu Val Glu Glu Leu Met Val Lys

290

295

300

Gly Val Gly Val Val Asp Gln Ala Leu Arg Glu Ala Phe Gln Ile Leu

5

305

310

315

320

Lys Gln Phe Gln Glu Ala Lys Gln Gly Ser Leu Cys Asn Gln Ala Ile

325

330

335

10

Met Leu Ile Ser Asp Gly Ala Val Glu Asp Tyr Glu Pro Val Phe Glu

340

345

350

Lys Tyr Asn Trp Pro Asp Cys Lys Val Arg Val Phe Thr Tyr Leu Ile

355

360

365

15

Gly Arg Glu Val Ser Phe Ala Asp Arg Met Lys Trp Ile Ala Cys Asn

370

375

380

Asn Lys Gly Tyr Tyr Thr Gln Ile Ser Thr Leu Ala Asp Thr Gln Glu

20

385

390

395

400

Asn Val Met Glu Tyr Leu His Val Leu Ser Arg Pro Met Val Ile Asn

405

410

415

25

His Asp His Asp Ile Ile Trp Thr Glu Ala Tyr Met Asp Ser Lys Leu

420

425

430

Leu Ser Ser Gln Ala Gln Ser Leu Thr Leu Leu Thr Thr Val Ala Met

435

440

445

Pro Val Phe Ser Lys Lys Asn Glu Thr Arg Ser His Gly Ile Leu Leu

450

455

460

5 Gly Val Val Gly Ser Asp Val Ala Leu Arg Glu Leu Met Lys Leu Ala

465

470

475

480

Pro Arg Tyr Lys Leu Gly Val His Gly Tyr Ala Phe Leu Asn Thr Asn

485

490

495

10

Asn Gly Tyr Ile Leu Ser His Pro Asp Leu Arg Pro Leu Tyr Arg Glu

500

505

510

Gly Lys Lys Leu Lys Pro Lys Pro Asn Tyr Asn Ser Val Asp Leu Ser

15

515

520

525

Glu Val Glu Trp Glu Asp Gln Ala Glu Ser Leu Arg Thr Ala Met Ile

530

535

540

20 Asn Arg Glu Thr Gly Thr Leu Ser Met Asp Val Lys Val Pro Met Asp

545

550

555

560

Lys Gly Lys Arg Val Leu Phe Leu Thr Asn Asp Tyr Phe Phe Thr Asp

565

570

575

25

Ile Ser Asp Thr Pro Phe Ser Leu Gly Ala Val Leu Ser Arg Gly His

580

585

590

Gly Glu Tyr Ile Leu Leu Gly Asn Thr Ser Val Glu Glu Gly Leu His

595 600 605

Asp Leu Leu His Pro Asp Leu Ala Leu Ala Gly Asp Trp Ile Tyr Cys  
610 615 620

5

Ile Thr Asp Ile Asp Pro Asp His Arg Lys Leu Ser Gln Leu Glu Ala  
625 630 635 640

Met Ile Arg Phe Leu Thr Arg Lys Asp Pro Asp Leu Glu Cys Asp Glu  
10 645 650 655

Glu Leu Val Arg Glu Val Leu Phe Asp Ala Val Val Thr Ala Pro Met  
660 665 670

15

Glu Ala Tyr Trp Thr Ala Leu Ala Leu Asn Met Ser Glu Glu Ser Glu  
675 680 685

His Val Val Asp Met Ala Phe Leu Gly Thr Arg Ala Gly Leu Leu Arg  
690 695 700

20

Ser Ser Leu Phe Val Gly Ser Glu Lys Val Ser Asp Arg Lys Phe Leu  
705 710 715 720

Thr Pro Glu Asp Glu Ala Ser Val Phe Thr Leu Asp Arg Phe Pro Leu  
25 725 730 735

Trp Tyr Arg Gln Ala Ser Glu His Pro Ala Gly Ser Phe Val Phe Asn  
740 745 750

Thr Ala Ser Thr Ala Val Ala Val Thr Val Asp Lys Arg Thr Ala Ile  
5           770                   775                   780

10 Phe Trp Ala Ala Thr Arg Gln Cys Ser Thr Val Asp Gly Pro Tyr Thr  
805 810 815

15

Gly Phe Ile Leu Ile Ser Lys Arg Ser Arg Glu Thr Gly Arg Phe Leu

835 840 845

Phe Ser Gln Val Thr Met Tyr Asp Tyr Gln Ala Met Cys Lys Pro Ser  
865 870 875 880

Phe Leu Thr Ala Thr Arg Trp Leu Leu Gln Glu Leu Val Leu Phe Leu  
900 905 910

Leu Glu Trp Ser Val Trp Gly Ser Trp Tyr Asp Arg Gly Ala Glu Ala  
 915 920 925

5 Lys Ser Val Phe His His Ser His Lys His Lys Lys Gln Asp Pro Leu  
 930 935 940

Gln Pro Cys Asp Thr Glu Tyr Pro Val Phe Val Tyr Gln Pro Ala Ile  
 945 950 955 960

10

Arg Glu Ala Asn Gly Ile Val Glu Cys Gly Pro Cys Gln Lys Val Phe  
 965 970 975

15

Val Val Gln Gln Ile Pro Asn Ser Asn Leu Leu Leu Leu Val Thr Asp  
 980 985 990

Pro Thr Cys Asp Cys Ser Ile Phe Pro Pro Val Leu Gln Glu Ala Thr  
 995 1000 1005

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Glu Val Lys Tyr Asn Ala Ser Val Lys Cys Asp Arg Met Arg Ser Gln  
 1010 1015 1020

Lys Leu Arg Arg Arg Pro Asp Ser Cys His Ala Phe His Pro Glu Val  
 1025 1030 1035 1040

25

Arg Val Glu Ala Asp Arg Gly Trp Ala Gly Phe Ser Ser Pro Asn Pro  
 1045 1050 1055

Leu Cys Leu Gly Leu Cys Pro Cys Arg Gln Glu His Ile Gly Met Pro

1060

1065

1070

Met Asn Thr Pro Val Pro Val Leu Leu Gly Gly Asn Ile Arg Val Tyr

1075

1080

1085

5

Ala Leu

1090

10

&lt;210&gt; 11

&lt;211&gt; 188

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

15

&lt;400&gt; 11

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20

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ctggaaac

188

25

&lt;210&gt; 12

&lt;211&gt; 58

&lt;212&gt; PRT

30

&lt;213&gt; Homo sapiens

&lt;400&gt; 12

Met Pro Ala Thr Pro Asn Phe Leu Ala Asn Pro Ser Ser Ser Ser Arg

1 5 10 15

Trp Ile Pro Leu Gln Pro Met Pro Val Ala Trp Ala Phe Val Gln Lys

5 20 25 30

Thr Ser Ala Leu Leu Trp Leu Leu Leu Leu Gly Thr Ser Leu Ser Pro

35 40 45

10 Ala Trp Gly Gln Ala Lys Ile Pro Leu Glu

50 55

15 <210> 13

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<213> Homo sapiens

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25

<210> 14

<211> 58

<212> PRT

30 <213> Homo sapiens



Glu Asn Ala Gln Asp Cys Gly Gly Ala Ser Asp Thr Ser Ala Ser Ser Pro

5

Pro Leu Leu Leu Leu Pro Val Cys Ala Trp Gly Leu Leu Pro Gln Leu

20                      25                      30

10      Leu Arg

[illegible]